

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (Currently Amended): An optical transmitter module which has an optical semiconductor element, an optical fiber optically coupled to said optical semiconductor element, ~~an inline optical isolator provided for said optical fiber, and~~ a package case containing said optical semiconductor element and said optical fiber, and an optical isolator disposed on a side face of said package case and arranged to optically couple to a distal end of said optical fiber inside said package case for optical coupling with another optical fiber provided outside said package case, comprising:

a substrate member with one end of said optical fiber on the light incident side fixed thereon to be optically coupled to said optical semiconductor element;

a thermoelectric cooler with said substrate member joined to a top surface thereof; and

a pipe-like support member projecting from the side face of said package case for fixing said optical isolator,

wherein said optical isolator is joined on its whole perimeter to said pipe-like support member at a distal end thereof so as to be fixed to said pipe-like support member.

Claim 2 (Original): The optical transmitter module according to claim 1, wherein the end of said optical fiber on the light incident side is spherical or conical in shape.

Claim 3 (Previously Presented): The optical transmitter module according to claim 1, wherein the length of said optical fiber from said optical isolator to the point at which said optical fiber is fixed to optically couple to said optical semiconductor element is 15 to 25 mm.

Claim 4 (Previously Presented): The optical transmitter module according to claim 1, wherein said optical isolator is fixed to said pipe-like support member through laser welding or brazing.

Claim 5 (Currently Amended): An optical transmitter module which has an optical semiconductor element, an optical fiber optically coupled to said optical semiconductor element, ~~an inline optical isolator provided for said optical fiber,~~ a substrate member with one end of said optical fiber fixed thereon to optically couple to said optical semiconductor element, a thermoelectric cooler with said substrate member joined to the top surface thereof, ~~and a package case containing said optical semiconductor element, and said optical fiber, said substrate member and said thermoelectric cooler, and an optical isolator disposed on a side face of said package case and arranged to optically couple to a distal end of said optical fiber inside said package case for isolation and optical coupling with another optical fiber provided outside said package case.~~

wherein one end of said optical fiber is bonded to the top surface of said substrate member, and then said optical isolator is welded on its whole perimeter to a pipe-like support member at a distal end thereof, which said pipe-like support member is provided on the side face of said package case.

Claim 6 (Currently Amended): An optical transmitter module which has an optical semiconductor element, an optical fiber, ~~an optical isolator provided for said optical fiber,~~ a substrate member with one end of said optical fiber fixed thereon to optically couple to said optical semiconductor element, a thermoelectric cooler controlling the temperature of said optical semiconductor element, ~~and a package case~~ containing said optical semiconductor element, said optical fiber, said substrate member and said thermoelectric cooler, and an optical isolator disposed on a side face of said package case and arranged to optically couple to a distal end of said optical fiber inside said package case for isolation and optical coupling with another optical fiber provided outside said package case.

wherein said substrate member and said optical semiconductor element are provided on the top surface of said thermoelectric cooler, and said optical isolator is fixed on its whole perimeter to a pipe-like support member at a distal end thereof, which said pipe-like support member is projected from the side face of said package case.

Claim 7 (Original): The optical transmitter module according to claim 6, wherein a signal light passing through said optical isolator is a substantially collimated light or a substantially converged light.

Claim 8 (Previously Presented): The optical transmitter module according to claim 1, wherein said optical fiber positioned between said optical isolator and said pipe-like support member is arranged in a bent state.

Claim 9 (Previously Presented): The optical transmitter module according to claim 5, wherein said optical fiber positioned between said optical isolator and said pipe-like support member is arranged in a bent state.

Claim 10 (Previously Presented): The optical transmitter module according to claim 6, wherein said optical fiber positioned between said optical isolator and said pipe-like support member is arranged in a bent state.

Claim 11 (Previously Presented): The optical transmitter module according to claim 1, wherein a signal light passing through said optical isolator is a substantially collimated light or a substantially converged light.

Claim 12 (Previously Presented): The optical transmitter module according to claim 5, wherein a signal light passing through said optical isolator is a substantially collimated light or a substantially converged light.

Claim 13 (Currently Amended): An optical transmitter module, comprising:

a thermoelectric cooler positioned inside a package case;

a substrate mounted on the thermoelectric cooler inside the package case;
an optical semiconductor element disposed on the substrate to generate a light beam;

an optical fiber disposed on the substrate, and optically coupled to the optical semiconductor element to transport the light beam, via a side face of the package case;

an optical isolator disposed outside of the package case, ~~and aligned with the~~ optical fiber, via the side face of the package case, and optically connected to a distal end of said optical fiber to provide a substantially collimated light beam or a substantially converged light beam;

a pipe-like support member projecting from the side face of the package case to fix the optical isolator,

wherein the optical isolator is joined on its whole perimeter to the pipe-like support member at a distal end thereof so as to be fixed to the pipe-like support member.

Claim 14 (Previously Presented): The optical transmitter module according to claim 13, wherein the end of the optical fiber on a light incident side is spherical or conical in shape.

Claim 15 (Previously Presented): The optical transmitter module according to claim 13, wherein the length of the optical fiber from the optical isolator to the point at which the optical fiber is fixed to optically couple to the optical semiconductor element is 15 to 25 mm.

Claim 16 (Previously Presented): The optical transmitter module according to claim 13, wherein the optical fiber positioned between the optical isolator and the pipe-like support member is arranged in a bent state.